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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,612	05/23/2001	Michael J. Lemon	10012649-1	8359

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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Fort Collins, CO 80527-2400

EXAMINER

STEVENS, ROBERT

ART UNIT PAPER NUMBER

2176

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,612

Applicant(s)

LEMON ET AL.

Examiner

Robert M Stevens

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/23/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending in Application No. 09/862,612, entitled "Lightweight Dynamic Service Conversation Controller", filed 5/23/2001 by Lemon et al. Claims 1, 11 and 16 are independent.

2. The Office acknowledges Information Disclosure Statement filed on 5/23/2001.

Priority

3. Applicant makes no claim to either domestic or foreign priority.

Drawings

4. The Office objects to Figure 1.

5. **Regarding Fig. 1:** two paths are shown from block #210, which is NOT a decision point (e.g., Y/N). It is unclear from the drawings, which path is to be traversed and when.

6. **Further regarding Fig. 1:** no interfaces to Fig. 1 from Fig. 2 are shown, as described in the specification at p. 7 lines 19-23 and 27-30.

7. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c) and 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

8. The disclosure is objected to because of the following informalities:
 - A. The Background section, starting on page 1 line 16, lists several prior art papers/products. These referenced materials should be submitted in an IDS.
 - B. Page 3 line 9 “explicitly” should be “explicit”, p. 9 line 5 (“CDL”) and line 12 (“WSDL”) reference acronyms that are not expanded within the specification. Applicant is reminded to please correct all spelling/grammatical/etc. mistakes throughout the specification (including the claims and drawings).
 - C. Page 5 lines 2, 4, 9, 12, 15, ... etc.: The specification states repeatedly that elements of Applicant’s controller may perform X (which can also be interpreted

as not having to perform X). Applicant needs to positively describe an embodiment in order to satisfy the enablement requirements (i.e., "Y performs X" rather than "Y may perform X").

- D. Page 7 lines 4-6: as in drawings comment, how would one skilled in the art know which path (212 or 214) to follow?
- E. Page 7 lines 19-23: This passage is not properly reflected in Fig. 1, which discloses the only processing after #200 as being #212 and #214.
- F. Page 7 lines 27-30: This passage is not properly reflected in Fig. 1, which does not disclose any inputs to #210.

Claim Rejections - 35 USC § 101

- 9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- 10. **Claims 1-24 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.

Regarding independent claims 1 and 16: The language of these claims is directed to subject matter that is not tangibly embodied.

Regarding independent claim 11: The language of this claim merely describes a computer program per se.

As such, this raises a question as to whether each of these claims is directed merely to an abstract idea that is not tied to a technological art, environment or machine, which would result in a practical application producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35 USC 101.

One technique for satisfying the requirements of 35 USC 101 is to claim code residing in memory (i.e., hardware), wherein that code produces a tangible result.

Claims 2-10, 12-15 and 17-20 are dependent upon claims 1, 11 and 16, respectively, and do not add any limitations that would render these claims statutory under 35 USC 101. Therefore, these claims are likewise rejected.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. **Claims 1-21 are rejected under 35 USC 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding independent claims 1, 11 and 16, no implementation details were provided as to the determining/identifying of valid “document types” (claim 1 line 5, claim 11 line 7, claim 16 lines 6-7 of the claim itself). In fact, no particular document type was ever identified in the specification.

Claims 2-10, 12-15 and 17-20 are dependent upon claims 1, 11 and 16, respectively, and therefore likewise rejected.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 1 and 4-18 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Stewart et al (US Patent Application Publication No. 2002/0161688, relying upon provisional applications filed Feb. 16 and Dec. 29, 2000, hereafter referred to as “Stewart”) in view of Chiang et al (US Patent Application Publication No. 2004/0221292, provisionally filed Aug. 8, 2000, hereafter referred to as “Chiang”). Euna Jeong et al (“Induction of Integrated View for

XML Data with Heterogeneous DTDs”, CIKM ‘01, Nov. 5-10, 2001, ACM 1-581 (13-436-3/01/0011), pp. 151-158, hereafter referred to as “Jeong”)

Regarding independent claim 1, Stewart discloses:

A method for implementing a conversation between a client and a service, comprising:

determining a current state of the conversation ([0144], re: maintaining conversation status);

determining valid input document types for the current state ([0157] re: “knows how to handle the type of message received”);

verifying whether the message is of one of the valid input document types for the current state ([0157] re: “knows how to handle the type of message received”); and

dispatching the message to appropriate service entry points provided by the service, until the service produces an output document of a valid output document type. ([0247] re: “selects a subset of <trading partner> nodes” and [0256] re: “until all filters return true”)

However, Stewart does not explicitly disclose:

receiving a message on behalf of the service;

Chiang, though, discloses:

receiving a message on behalf of the service; (Abstract, especially the 2nd sentence)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 4, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Stewart does not explicitly disclose:

further comprising formatting and returning to the client the output document in a form appropriate to the client.

Chiang, though, discloses:

further comprising formatting and returning to the client the output document in a form appropriate to the client. (Abstract, re: (ii) converting from server format/source language to end user format/target language)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 5, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

calculating a new state of the conversation from the valid output document type; ([0144] re: maintains conversation status)

However, Stewart does not explicitly disclose:

determining new input document types that are valid in the new state; and

prompting for the new input document types that are valid in the new state.

Chiang, though, discloses:

determining new input document types that are valid in the new state;
([0031] re: invoking type descriptor ... of source and target languages) *and*
prompting for the new input document types that are valid in the new state. ([0031] re: invoking type descriptor ... of source and target languages)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 6, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Stewart does not explicitly disclose:

wherein the determining the current state step includes asking the service for conversation specifications.

Chiang, though, discloses:

wherein the determining the current state step includes asking the service for conversation specifications. ([0031] re: type descriptor and language metamodels)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a

programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 7, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

further comprising maintaining a "state" of the conversation. ([0144] re: maintains conversation status)

Regarding claim 8, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

further comprising retrieving a "state" of the conversation from the service. ([0144] re: maintains conversation status)

Regarding claim 9, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

*calculating a new state of the conversation from the valid output document type; ([0144] re: maintains conversation status) and
invoking client methods that can produce new input documents that are valid in the new state. ([0162] re: business logic plug-ins)*

Regarding claim 10, which is dependent upon claim 9, the limitations of claim 9 have been previously addressed.

However, Stewart does not explicitly disclose:

further comprising sending the new input documents to the service.

Chiang, though, discloses:

further comprising sending the new input documents to the service.
(Abstract, especially the 2nd sentence)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding independent claim 11, Stewart discloses:

A conversation controller that implements a conversation between a client and a service, comprising:

... , wherein the incoming context handler is capable of parsing the message and extracting a document type of the message ([0109], re: processing protocol specific headers);

an interaction handler coupled to the incoming context handler and capable of identifying a current state ([0144], re: maintaining conversation status), ... and the document type ([0151]) of the message from the message; and

a dispatch handler coupled to the interaction handler, wherein the dispatch handler parses (Fig. 21, re: C-Hub router) the ... and forwards the message to service entry points of the service (Fig. 21, re: C-Hub transport).

However, Stewart does not explicitly disclose:

an incoming context handler that receives a message on behalf of the service, ... ;
... ;

*... , conversation specifications and ...; and
... conversation specification*

Chiang, though, discloses:

*an incoming context handler that receives a message on behalf of the
service (Abstract, especially the 2nd sentence), ... ;
... ;
... , conversation specifications ([0031] re: type descriptor and language
metamodels) and ...; and
... conversation specification ([0031] re: type descriptor and language
metamodels)*

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 12, which is dependent upon claim 11, the limitations of claim 11 have been previously addressed.

Stewart further discloses:

*wherein the interaction handler validates if the document type of the
message is valid for the current state. ([0144] re: maintains conversation status)*

Regarding claim 13, which is dependent upon claim 11, the limitations of claim 11 have been previously addressed.

Stewart further discloses:

wherein the interaction handler calculates a new state of the conversation ([0144] re: maintains conversation status) and

However, Stewart does not explicitly disclose:

... and new valid document types for the new state from a response returned by the service.

Chiang, though, discloses:

... and new valid document types for the new state from a response returned by the service. ([0031] re: invoking type descriptor ... of source and target languages)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 14, which is dependent upon claim 13, the limitations of claim 13 have been previously addressed.

Stewart further discloses:

wherein the interaction handler validates if the document type of the message is valid for the current state. (Fig. 21 #422 re: XOCP MSGENCODER)

Regarding claim 15, which is dependent upon claim 11, the limitations of claim 11 have been previously addressed.

Stewart further discloses:

further comprising a client interaction handler that dispatches a reply from the service to the client and forwards a response from the client to the service. (Fig. 21 re: “C-Hub Transport”)

Regarding independent claim 16, Stewart discloses:

A computer readable medium comprising instructions for implementing a conversation between a client and a service, the instructions comprising:

determining a current state of the conversation ([0144], re: maintaining conversation status);

determining valid input document types for the current state ([0157] re: “knows how to handle the type of message received”);

verifying whether the message is of one of the valid input document types for the current state ([0157] re: “knows how to handle the type of message received”); and

dispatching the message to appropriate service entry points provided by the service, until the service produces an output document of a valid output document type. ([0247] re: “selects a subset of <trading partner> nodes” and [0256] re: “until all filters return true”)

However, Stewart does not explicitly disclose:

receiving a message on behalf of the service;

Chiang, though, discloses:

receiving a message on behalf of the service; (Abstract, especially the 2nd sentence)

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It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Chiang for the benefit of Stewart, because to do so would allow a programmer to integrate dissimilar applications, as taught by Chiang in [0010]. These references were all applicable to the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 17, this claim is substantially similar to claim 4, and therefore likewise rejected.

Regarding claim 18, this claim is substantially similar to claim 5, and therefore likewise rejected.

15. **Claims 2-3 and 19-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Stewart et al (US Patent Application Publication No. 2002/0161688, relying upon provisional applications filed Feb. 16 and Dec. 29, 2000, hereafter referred to as “Stewart”) in view of Chiang et al (US Patent Application Publication No. 2004/0221292, provisionally filed Aug. 8, 2000, hereafter referred to as “Chiang”) and further in view of Laura LeMay et al (Sams Teach Yourself Java 2 in 21 Days, Sams Publishing, Indianapolis, IN, © 1999, pp. 422-430, hereafter referred to as “LeMay”)

Regarding claim 2, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

wherein if messages of invalid input documents types are received ([0144] re: errors), ...

However, Stewart does not explicitly disclose:

... , further comprising raising exceptions.

LeMay, though, discloses:

... , further comprising raising exceptions. (Throwing exceptions is a well known programming practice. See the p. 426 section entitled “Throwing Exceptions”)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of LeMay for the benefit of Stewart in view of Chiang, because to do so would enable a programmer to handle different types of errors (including custom exceptions), as taught by LeMay in the first paragraph under section “Creating Your Own Exceptions” on p. 427. These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Regarding claim 3, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Stewart further discloses:

wherein if no valid output document is produced by the service ([0144] re: errors), ...

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However, Stewart does not explicitly disclose:

... , *further comprising raising exceptions.*

LeMay, though, discloses:

... , *further comprising raising exceptions.* (Throwing exceptions is a well known programming practice. See the p. 426 section entitled “Throwing Exceptions”)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of LeMay for the benefit of Stewart in view of Chiang, because to do so would enable a programmer to handle different types of errors (including custom exceptions), as taught by LeMay in the first paragraph under section “Creating Your Own Exceptions” on p. 427. These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Regarding claims 19-20, these claims are substantially similar to claims 2-3, respectively, and therefore likewise rejected.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Non-patent Literature

“Simple Object Access Protocol (SOAP) 1.1”, W3C Note, May 8, 2000, pp. 1-34 (downloaded from www.w3.org/TR/2000/NOTE-SOAP-20000508/).

“SOAP Messages with Attachments”, W3C Note, Dec. 11, 2000, pp. 1-12 (downloaded from www.w3.org/TR/SOAP-attachments).

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Snell, James, "Exposing Application Services with SOAP", Published on XML.com, Jul. 12, 2000, pp. 1-5 (downloaded from www.xml.com/lpt/a/2000/07/12/soap/mssoaptutorial.html).

Reinshagen, Dirk, "XML messaging, Part 1", Published on JavaWorld.com, Mar. 2001, pp. 1-11 (downloaded from www.javaworld.com/javaworld/jw-03-2001/jw-0302-xmlmessaging_p.html).

Modi, Tarak, "Clean Up Your Wire Protocol with SOAP, Part 1", Published on JavaWorld.com, Mar. 2001, pp. 1-11 (downloaded from www.javaworld.com/javaworld/jw-03-2001/jw-0330-soap_p.html).

Kotok, Alan, "Intregrating SOAP into ebXML", Published on ITworld.com, Apr. 17, 2001, pp. 1-4 (downloaded from www.itworld.com/AppDev/1472/ITW010404ebXML/pfindex.html).

Box, Don, "Inside SOAP", Published on XML.com, Feb. 9, 2000, pp. 1-7 (downloaded from www.xml.com/lpt/a/2000/02/09/feature/index.html).

US Patent Application Publications

Lavin et al	US2003/0037174
Au et al	US2002/0174034
Houben et al	US2002/0147745
Rivadalla et al	US2002/0035648
Ho et al	US2002/0042849

US Patents

Slaughter et al	6,643,650
Nykanen et al	6,714,778
Dan et al	6,401,111
Niblett et al	6,336,784
Xu	6,418,462
Watson et al	5,812,784
Silverstein et al	5,758,084
Iyengar	5,961,601

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102.

The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens
Art Unit 2176
Date: November 8, 2004


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

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